

BUILDING AN INTRANET: A COLLABORATIVE EFFORT

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Abstract: This paper describes the introduction of the Internet to a hospital and the concurrent development of their intranet. A timeline, the need for collaboration, and the technique used to persuading senior management to adopt this new technology are described. Finally, the steps being taken at a college library to develop an intranet are shared.

Keywords: Intranets (Computer Networks), Communication in Organizations, Web Sites-Design-Planning, Diffusion of Technology

Introducing an Intranet

Intranet: a sophisticated internal web site that puts information directly into the hands of individual staff members. The development of intranets is creating yet another role for librarians as information managers in our institutions. As an increasing amount of information is made available through these internal Internet sites, the librarian's role may include software trainer, organizer, HTML editor or web manager.

The concept of intranets has grown in popularity over the last few years. High levels of security can be maintained, since web pages are available only to the staff of a company, hospital or corporation. Firewalls, composed of hardware and software, provide password protection against non-authorized individuals. Because hospitals must devote considerable resources to protecting patient information, they are an ideal setting for building an Intranet. An article in the *Investor's Business Daily* on the 14th of May states that intranets are "seriously making people rethink corporate computing". A study of seven companies by International Data Corporation shows that returns average about 1000%, and that these gains are seen within weeks.

The Lutheran Medical Center Experience

We began our journey in April 1995. Our Information Services (IS) department hired a consultant to help determine the hardware and software configurations to be used for the web server and browser. A Unix machine running Linux was chosen for the server and Borderware's firewall package was installed. Netscape was chosen as our browser package and was immediately installed on selected PCs.

The library staff took the lead and developed the first pages for the hospital. The library home page consists of an introduction to services and detailed descriptions of library staff roles. From the home page, services are described and appropriate forms are made available for interlibrary loan, literature searching and book or journal purchase requests. All of this was a learning experience, as none of the staff had formal training in writing for the Web. Creating HTML tables, lists, and forms soon became less mysterious. Additional library web pages give journals held in the library (updated every six months), currently received books (updated monthly) and training classes (updated quarterly).

Concurrently, we considered who should have access to the Internet's World Wide Web. Initially, IS viewed Internet access as an option that few people would use. Managers, researchers and a few others were seen as the limited user group. As such, IS wanted to limit the Netscape installation. When the intranet concept was introduced, the project increased in scope enormously. The combination of both Internet and intranet access was seen as a way to greatly facilitate communication and improve daily operations. It was determined that Netscape would be installed on every PC throughout the corporation by the end of 1996 (approximately 800 machines). This was then moved back to mid-1997.

Hospital staff required training on both e-mail and Internet usage. Beginning in December 1995, library staff taught classes on Internet concepts, how to use Netscape, and how to use the internal e-mail system to send external messages.

Corporate-Wide Initiative

In April 1996, two members of the Intranet Team presented our intranet proposal to senior management. This could not have become a corporate-wide initiative without their support. Instead, it would have remained primarily a library/IS project. The corporation had just released a new "communication culture" document which stated that communication is a shared responsibility, which supports the idea of the intranet. Employees were now charged with actively seeking and using information that the organization made available to them.

Senior management requested a one-page explanation of our proposal and allowed a 20 minute presentation. They were specifically interested in the costs and benefits associated with the Intranet. Five areas were outlined:

1. Objectives of the project:
 - to use electronic media to enhance the corporation's internal and external communication
 - and to provide maximum access to avert a two-tiered communication system
2. A description of how communications would be enhanced
3. Implementation of communication safeguards
4. The phases of the project
5. Projected costs and projected cost savings.

Because we had built a small prototype, we had developed enough expertise to answer questions. We received the approval to implement the full corporate-wide Intranet at that presentation much to our surprise!

We then offered beginning HTML classes for selected individuals who would be our department leads. This increased the number of people who can contribute information to the site. Building an intranet before creating an external web presence has a number of benefits. It establishes the core team (the major skill set group) and increases commitment to develop and maintain content by departments/services throughout the organization. Skills that do not exist internally can be identified and outsourced to appropriate consultants. Projecting costs for the external site is clarified as progress is made on the internal site.

Installation of Netscape department by department began in November 1996. Standards and guidelines for creating and maintaining pages were developed in February 1997. The "Grand Opening" occurred in April 1997 when the LMCweb became accessible in the hospital's cafeteria on two PCs.

Team Development

Defining our target audience to include all employees and medical staff broadened our priorities and pointed to key players in the evolution of the project. Building either an intranet or an Internet site requires having the right team members. Each member brings a set of skills that, in concert, means a successful venture. Several key areas have been identified:

1. Project Management
This may be the librarian's role - to get buy-in, organize the site pages, coordinate people/departments/services, develop and maintain a budget for the project, and identify needed skills which must be obtained from outside the organization.
2. Graphic Design - may be in-house or outsourced.
3. Technical Expertise

It is extremely beneficial to have a friendly rapport with your IS department because someone with technical and programming expertise is needed to manage the server and write CGI, Perl, and/or Java scripts.

4. HTML Writing/Editing
Many librarians may feel comfortable in this role - at least for the library pages.
5. Training - on Netscape and HTML
Librarians can also easily assume this role and will provide enhanced visibility in the institution.

Lessons Learned

1. It became clear that a successful intranet must include information employees continually seek. We began posting internal job openings and working with the Human Resources (HR) and Communications departments to include benefit and current news about our organization.
2. A considerable amount of time was spent during the first year and a half educating management and staff about web technology and the benefits an intranet would bring to the workplace.
3. We chose to try and train others throughout the hospital in HTML skills. We now realize that novice HTML writers will require intensive support. Is it worth it? This is most likely a decision that will depend on your institution and the skills, aptitude, and eagerness of your staff.
4. Site maintenance is a long-term commitment. Part of the LMCweb guidelines address this issue - a department must agree to the maintenance of their pages before the first page is ever presented to the organization.

To the Future or Ongoing Issues

Challenges will be encountered! Our challenge to identify the most appropriate search engine for the site remains unresolved. We want to find one that searches both numbers (for policies and procedures) and text. The Netscape roll-out is ongoing. Keeping it on the priority list for an overworked IS department is an ongoing dialog. Development of an external web site was projected for mid-1997. This will eventually happen, but we are now considering a relationship with an outside vendor and/or affiliated institutions. One thing is certain, there is *nothing static* about an intranet. As graphic design enhancements are made, text may change too, producing a different look and feel for the site. Getting the contributors to realize that it will never be done and never be perfect is an ongoing process.

Now I'll shift gears and address the progress we've made at the Consortium Library in Anchorage.

Where are we at the University of Alaska Anchorage

Unlike many hospitals, academic centers have been using the Internet for many years. It would be a rare opportunity to champion the values of Internets in this environment. However, the benefits of an intranet are not always as easily seen, even for this group of early adopters.

At UAA, the Internet was introduced in stages, beginning in the late 80's. Library staff had full access in 1993. The library has had a local Novell network since 1991 and makes available 45 CD-ROM based databases ranging from ABI/Inform to Medline to Wenger Anthropological Eskimo Database. However, most of these resources are available only when the student or faculty member is actually IN the library. A new library Dean beginning September 28th will likely mean more changes are in store for the library and the library staff.

The need for mounting internal documents, staff-specific material or for-library-eyes-only information began just this past summer. A small committee consisting of the library member of the university-wide Internet committee, two technical support personnel, and the author of this paper met in early summer to discuss the pros, cons, and possible types of material to be included on the library's intranet. Before anything is added permanently to the web server, other library faculty reviews the content.

Developing an intranet will provide a central location for critical information, will make sure that updated versions of essential information were available to all staff, and will increase communication. However, this new use of an old technology will mean staff will have to learn new behaviors, decisions will have to be made concerning the format of documents (e.g., handouts in PDF or HTML or both or other formats), practical considerations of whether we have enough server capacity and will we be able to rely on having specific software (such as MS Office 97) available on every staff machine.

We next discussed what types of information would be appropriate. There are no surprises with our list:

Handouts, library map, specific "department" pages (such as Computers and Networking), policies and procedures, minutes of meetings, phone list, staffing schedules, vacation schedule, and the reference desk schedule.

To date, 90% of the library handouts have been converted to HTML, the CAN department has updated pages available to the staff and a calendar program has been found which will be tested in hopes it will address the scheduling questions.

I hope this quick overview of how intranets have been developed in two very different organizations will help you realize that we, as librarians, do have a role to play in this new forum of information management. Our role can range from creating library pages to selecting the external links that will appear on various pages, to being a member of the

team that organizes the entire site. Working on these projects has been a thrilling and a powerful learning experience.

The following is a list of resources and various tools we have used and found valuable.

Books

- Lemay, Laura. 1996. *Teach Yourself Web Publishing with HTML 3.2 in 14 Days*. Sams.net Publishing, Indianapolis, IN.
- Bernard, Ryan. 1996. *Corporate Intranet: create and manage an internal web for your organization*. John Wiley & Sons, New York.
- Weinman, Lynda. 1996. *Designing Web Graphics: how to prepare images and media for the Web*. New Riders Publishing, Indianapolis, IN.
- Chandler, David M. 1995. *Running a Perfect Web Site*. Que, Indianapolis, IN.

Journals

- *Internet World*, Mecklermedia Corporation
- *Web Week*, Mecklermedia Corporation
- *Ragan's Intranet Report*, Ragan Communications

Listservs

- web4lib@library.berkeley.edu (listserv@library.berkeley.edu)
- adv-html@ua1vm.ua.edu (listserv@ua1vm.ua.edu)

Web sites

- <http://www.intranetjournal.com/>
 - (The Intranet Journal)
- <http://bones.med.ohio-state.edu/eric/papers/primer/webdocs.html>
 - (Writing for the Web: a primer for librarians)
- <http://sunsite.berkeley.edu/Web4Lib/faq.html>
 - (The Library Web Manager's Reference Center)
- <http://www.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimer.html>
 - (A Beginner's Guide to HTML. The NCSA Beginner's Guide to HTML is the most frequently requested file on NCSA's Web servers).
- <http://jimmy.qmced.ac.uk/usr/im94jone/>
 - (Corporate Intranets: the last tool of survival for the corporate library? June 1998).